**DISCRETE APPLIED MATHEMATICS**
**VOLUME 67, NUMBERS 1–3, 30 MAY 1996**
**SPECIAL VOLUME: CHEMISTRY AND DISCRETE MATHEMATICS**

Abstracted/Indexed in: ACM Computing Reviews, Cambridge Scientific Abstracts, Current Contents: Physical, Chemical & Earth Sciences, Engineering Index/Compendex, INSPEC Information Services, International Abstracts in Operations Research, Mathematical Reviews, PASCAL, Science Citation Index, Statistical Theory and Method Abstracts, Zentralblatt für Mathematik.

**CONTENTS**

*R.C. Read*
Chemistry and Discrete Mathematics 1

*D. Babić and N. Trinajstić*
Möbius inversion on a poset of a graph and its acyclic subgraphs 5

*K.T. Balińska, H. Galina, L.V. Quintas and J. Szymańsk*
A kinetic approach to the random *f*-graph process. Paths, cycles and components 13

*I.P. Bangov*
Generation of molecular graphs based on flexible utilization of the available structural information 27

*T.J.N. Brown, R.B. Mallion, P. Pollak and A. Roth*
Some methods for counting the spanning trees in labelled molecular graphs, examined in relation to certain fullerenes 51

*S.J. Cyvin, B.N. Cyvin, J. Brunvoll and E.K. Lloyd*
Circumscribing certain polygonal systems 67

*J.R. Dias*
Graph theoretical invariants and elementary subgraphs of polyhex and polypent/polyhex systems of chemical relevance 79

*R. Grund, A. Kerber and R. Laue*
Construction of discrete structures, especially isomers 115

*F. Harary, W. Randolph and P.G. Mezey*
A study of maximum unit-circle caterpillars – tools for the study of the shape of adsorption patterns 127

*H. Wenchen, H. Wenjie and H. Ying*
Cut invariant *d* and bond orders of Kekuléan benzenoids 137

*J. Katriel*
Explicit expressions for the central characters of the symmetric group 149

*D.J. Klein and H. Zhu*
Resonance in elemental benzenoids 157

*M.E. Muzychuk, M.H. Klin and N.S. Zefirov*
On the mathematical model of triangulanes 175

*J. Pospichal and V. Kvasnička*
Pruning the search tree in the constructive enumeration of molecular graphs 189

*P. Rowlinson*
The characteristic polynomials of modified graphs 209

*Y.-N. Yeh, I. Gutman and C.-M. Fu*
Graph transformations which preserve the multiplicity of an eigenvalue 221

AUTHOR INDEX 229